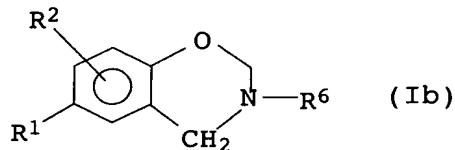
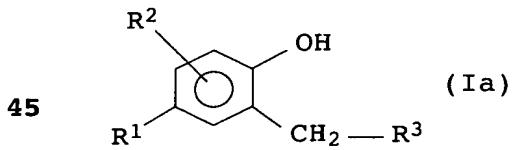


THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE
ARTICLE 34 AMENDED SHEETS (pages 41-44)

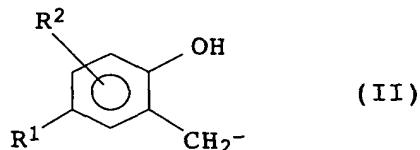
We claim:

1. A process for the preparation of
 5 polyisobutenyphenol-containing Mannich adducts by
 - a) alkylation of a phenol with highly reactive polyisobutene at below about 50°C in the presence of an alkylation catalyst;
 - 10 b) reaction of the reaction product from a) with formaldehyde, an oligomer or a polymer of formaldehyde and
 - 15 at least one amine which has at least one secondary amino function and no primary amino function or
 - 20 c) reaction of the reaction product from a) with at least one adduct of at least one amine which has at least one secondary or primary amino function and formaldehyde, an oligomer of formaldehyde, a polymer of formaldehyde or a formaldehyde equivalent.
- 25 2. A process as claimed in claim 1, wherein the amine used is 3-(dimethylamino)-n-propylamine, di[3-(dimethylamino)-n-propyl]amine, dimethylamine, diethylamine, di-n-propylamine or morpholine.
- 30 3. A process as claimed in claim 1, wherein, in step c), the adduct used is an aminal of formaldehyde with a secondary amine, selected from di-C₁-C₈-alkylamines whose alkyl groups may be substituted by an N(C₁-C₄-alkyl)₂ group, and cyclic
 35 amines, which have 4 to 6 carbon atoms and whose cyclic structure may be interrupted by O and/or N-C₁-C₄-alkyl.
4. A process as claimed in any of the preceding claims, wherein an adduct mixture is obtained which comprises at least
 40 40 mol% of compounds of the formula Ia and/or Ib,



where

- 5 R¹ is a terminally bonded polyisobutenyl radical,
 R² is H, C₁- to C₂₀-alkyl, C₁- to C₂₀-alkoxy, hydroxyl,
 a polyalkylenyl radical or CH₂NR⁴R⁵, where R⁴ and R⁵ have
 the meanings stated below, and
- 10 R³ is NR⁴R⁵, where R⁴ and R⁵, independently of one another,
 are selected from H, C₁- to C₂₀-alkyl, C₃- to
 C₈-cycloalkyl and C₁- to C₂₀-alkoxy radicals which may be
 interrupted and/or substituted by heteroatoms selected
 from N and O, and phenol radicals of the formula II



- 15 where R¹ and R² are as defined above;
 with the proviso that R⁴ and R⁵ are not simultaneously H
 or phenol radicals of the formula II; or R⁴ and R⁵,
 together with the N atom to which they are bonded, form a
 20 5-, 6- or 7-membered cyclic structure which has one or
 two heteroatoms selected from N and O and may be
 substituted by one, two or three C₁- to C₆-alkyl
 radicals; and
- 25 R⁶ is a radical R⁴ or R⁵ other than H.

5. A process as claimed in any of the preceding claims, wherein
 a Mannich adduct having a polydispersity of from 1.1 to 3.5
 is obtained.
- 30 6. A process as claimed in any of the preceding claims, wherein,
 in step c), an adduct which is obtained from at least one
 amine and formaldehyde, an oligomer of formaldehyde, a
 polymer of formaldehyde or a formaldehyde equivalent by
 reacting the two reactants for at least 15 minutes at above
 35 +15°C is used.
7. A process as claimed in any of claims 1 to 6, wherein the
 reaction mixture from b) or c) is fractionated by column
 chromatography over an acidic stationary phase by multistage
 40 elution with
- at least one hydrocarbon and then
 - at least one basic alcohol/water mixture.
- 45 8. A process as claimed in claim 7, wherein the basic
 alcohol/water mixture used is a mixture of

- a) from 75 to 99.5% by weight of at least one C₂- to C₄-alcohol,
 - b) from 0.4 to 24.4% by weight of water and
 - c) from 0.1 to 15% by weight of at least one amine which is volatile at room temperature.
- 5
- 9. A process as claimed in any of the preceding claims, wherein the adduct mixture obtained includes from 0 to 20, preferably 1 to 15, mol% of polyisobutlenylphenols from reaction step a) which are not reacted further.
 - 10
 - 10. A Mannich adduct obtainable by a process as claimed in any of claims 1 to 9.
- 15 11. A Mannich adduct comprising at least one compound of the formula Ia and/or Ib, as defined in claim 3.
12. The use of a Mannich adduct as claimed in claim 10 or 11 as a detergent additive in fuel and lubricant compositions.
- 20
13. An additive concentrate containing, in addition to conventional additive components, at least one Mannich adduct as claimed in claim 10 or 11 in amounts of from 0.1 to 99.9% by weight, preferably 0.5 to 80% by weight.
- 25
14. A fuel composition containing a main amount of a liquid hydrocarbon fuel and an amount, having detergent activity, of at least one adduct as claimed in claim 10 or 11.
- 30 15. A lubricant composition containing a main amount of a liquid, semisolid or solid lubricant and an amount, having detergent activity, of at least one adduct as claimed in claim 10 or 11.
- 35 16. The use of a fuel composition as claimed in claim 14 as a gasoline or diesel fuel